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STORAGE

DEPARTMENT OF MARINE AND FISHERIES
TORONTO
GENERAL METEOROLOGICAL REGISTER
FOR THE YEAR 1906

30 AUG 72

REMARKS ON THE METEOROLOGICAL RESULTS AT
TORONTO FOR THE YEAR 1906.

TEMPERATURE.

The mean temperature of the year 1906 was $46^{\circ}26$, being $1^{\circ}87$ warmer than the average of 66 years, and $1^{\circ}73$ warmer than 1905.

The mean temperature of the several months was in nine instances above and in three below the average for the respective months, the average defect to the average excess being in the ratio of $2^{\circ}1$ to $3^{\circ}2$. On each of 223 days the mean temperature was above the normal of that particular day and below on 142 days. The mean temperature of each month, with the difference from the normal, was: January, $31^{\circ}0+8^{\circ}5$; February, $21^{\circ}8-0^{\circ}4$; March, $26^{\circ}8-2^{\circ}3$; April, $44^{\circ}1+2^{\circ}8$; May, $53^{\circ}2+0^{\circ}7$; June, $65^{\circ}0+2^{\circ}6$; July, $60^{\circ}6+1^{\circ}7$; August, $71^{\circ}0+4^{\circ}7$; September, $64^{\circ}2+5^{\circ}4$; October, $48^{\circ}3+1^{\circ}5$; November, $37^{\circ}1+1^{\circ}8$; December, $22^{\circ}9-3^{\circ}5$. Dividing the year into the ordinary season we have for Winter $28^{\circ}0$; Spring, $41^{\circ}4$; Summer, $68^{\circ}6$; Autumn, $49^{\circ}9$. The mean daily range for the year was $16^{\circ}7$, the greatest monthly average occurring in September ($20^{\circ}7$) and the least in January ($12^{\circ}1$). The greatest daily range ($36^{\circ}9$) occurred on the 12th of May and the least ($3^{\circ}2$) on the 30th of December. The warmest month relatively was January, estimated by its excess above ($8^{\circ}5$) the normal. The warmest absolutely was August ($71^{\circ}0$); December was the coldest relatively, the mean being ($3^{\circ}5$) below the normal; the coldest absolutely was February ($21^{\circ}8$).

The climatic difference was $49^{\circ}2$; the warmest day was the 26th July, mean temperature $77^{\circ}5$ and the coldest the 3rd February, $-3^{\circ}9$, but the warmest day relatively was the 22nd January, being $28^{\circ}2$ above the normal and the coldest the 3rd February, $26^{\circ}5$ below the normal; the average temperature of the warmest and coldest days from former years was $78^{\circ}3$ and $2^{\circ}2$ below zero. The highest temperature of the year ($92^{\circ}1$) occurred on the 22nd July, and the lowest ($12^{\circ}1$ below zero) on the 2nd February. The annual range from these extremes was $104^{\circ}2$, being $3^{\circ}9$ more than 1905, and $0^{\circ}9$ more than the average annual range. There were thirty-four instances in which the temperature at the hour of observation was $20^{\circ}0$ above the normal and 44 when a defect of an equal amount occurred. The most striking deviations from the daily normal curve of temperature have been as follows:—

IN EXCESS.

January	3..	12.3	May	17..	13.8
"	4..	14.2	"	18..	15.4
"	14..	14.5	"	24..	13.1
"	15..	10.5	August	26..	13.4
"	16..	13.1	September	8..	12.0
"	20..	10.7	"	9..	15.2
"	21..	25.2	"	11..	12.6
"	22..	28.2	"	12..	13.0
"	23..	17.8	"	18..	16.9
"	30..	16.4	"	19..	13.2
February	20..	16.6	"	20..	14.1
"	21..	16.6	"	21..	16.8
"	23..	14.5	"	22..	12.7
"	24..	19.8	October	4..	12.7
"	25..	13.8	"	5..	16.6
April	18..	13.5	"	16..	12.4
"	19..	13.4	December	30..	12.3
May	12..	13.5	"	31..	17.6
"	16..	13.8			

IN DEFECT.

February	1.	12'1	March	22.	17'8
"	2.	26'5	"	23.	21'5
"	5.	24'6	October	31.	12'4
"	6.	24'3	December	3.	12'2
"	7.	14'5	"	7.	29'8
"	14.	12'0	"	8.	20'1
"	15.	14'6	"	11.	20'6
"	27.	13'4	"	23.	17'5
"	28.	14'1	"	24.	18'1

BAROMETRIC PRESSURE.

The mean height of the barometer was 29.658 inches, being 0.338 inches above the average. The month which showed the greatest deviation from the normal was February 0.174 in excess. July showing the least 0.000. Average deviation without reference to sign was small, being only 0.045. The highest reading was 30.505 at 8 a.m. of March 24th; and the lowest 28.752 at 2 p.m. January 4th, giving a range of pressure of 1.753 inches.

The number of days of large abnormal variations in which the average pressure differed by two-tenths and upwards from the normal was 141, the greatest number (19) occurring in January, March and October and the least (3) in August.

HUMIDITY.

The mean humidity of the year was 77, being equal to the average. The greatest monthly humidity of the year was 86 in December, and the least 67 in May. There were 14 cases of complete saturation at the hour of observation: 2 in January, 1 in March, 1 in June, 2 in October and 8 in December. The least humidity of the year at the hour of observation was 21 at 2 p.m. on the 25th April.

CLOUDS.

The extent of the sky clouded was on the average of the year six-tenths of the whole. September was the clearest month and December the most cloudy. During the year there were 54 days completely clouded, being 6 below the average (1872-1905) the greatest number (15) occurring in December; none being registered in the month of July and August.

WIND.

The resultant direction of the wind was N. 25° W., showing 60° more northing than 1905, and 36° more northing than in the seventeen years to 1890. The mean velocity of the wind without reference to direction was 10.78 miles. The most windy month was December, with an average of 15.31 miles per hour, and the least windy was July, with an average of 5.82 miles. The windiest day was November 22nd, average velocity 33.21 miles per hour, and the day of least velocity February 13th, average velocity 1.71 miles per hour. The highest velocity in one hour was 49.0 miles, 3 to 4 p.m. of the 6th December.

RAIN AND SNOW.

The total depth of rain that fell during the year was 27.206 inches, being 0.136 inches more than the average, and 1.381 inches more than the rainfall of 1905. The depth of snow 37.7 inches, was 28.9 inches less than the average, and 16.6 inches less than the snowfall of 1905. October was the most rainy month as to quantity (4.206), and with reference to the number of rainy days, June was the most rainy month; only 0.440 inches fell in February.

The day of greatest rainfall was the 19th October, when 2.161 inches fell. There were only 3 other days during the year on which over 1 inch fell.

The heaviest fall of snow was 7.0 inches on the 19th of March. Rain fell on 109 days, being 5 more than the average number, and 12 more than in 1905; snow fell on 44 days, being 20 less than the average and 5 less than in 1905.

There were 178 days on which no rain nor snow fell in 1906; there were 190 in 1905. The rain occupied 439 hours and the snow 249 hours in its fall, giving a total of 688 hours or 28 days and 16 hours when rain or snow was actually falling.

THUNDERSTORMS.

Of the 37 thunderstorms occurring during the year, the first was on the 29th of April, and the last one on October 8th, 1 occurred in April, 7 in May, 10 in June, 8 in July, 7 in August, 3 in September and 1 in October. The most severe storms were on May 16th, 18th, 26th, June 8th, 20th, July 10th, 29th, August 11th and September 2nd. Lightning alone on May 12th, 31st, June 9th, 15th, 28th, July 27th, August 20th, September 8th, 21st. Hail fell on May 16th and 18th.

AURORA.

Auroral displays were very few. Of the 2 observed 1 of the 2nd class occurred in June, 1 of the 4th class in December. There were 203 nights favourable for observation.

SUNSHINE.

The total duration of bright sunshine during the year was 2016.4 hours; number of hours the sun was above the horizon, 4464.1, ratio of registered to possible, 0.45.

GENERAL METEOROLOGICAL

MAGNETICAL OBSERVATORY,

Latitude 43° 40' N. Longitude 5h. 17m. 34°5s. W. Elevation

	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.
Average temperature.....	30° 95	21° 78	26° 76	44° 14	53° 20	65° 11	69° 57
Difference from average (66 years)...	+ 8° 54	- 0° 43	- 2° 29	+ 2° 81	+ 0° 67	+ 2° 57	+ 1° 74
Thermic Anomaly (Lat. 43° 40').....	- 1° 85	- 12° 92	- 13° 34	- 6° 06	- 4° 90	+ 0° 51	+ 0° 87
Highest temperature.....	56° 5	53° 3	49° 0	72° 0	86° 0	91° 0	92° 1
Lowest temperature.....	5° 2	- 12° 1	- 0° 8	26° 0	30° 5	42° 2	50° 8
Monthly and annual ranges.....	51° 3	65° 4	49° 8	46° 0	55° 5	48° 8	41° 3
Average maximum temperature.....	37° 02	31° 01	33° 17	53° 65	64° 15	75° 14	79° 90
Average minimum temperature.....	24° 87	13° 62	20° 78	35° 72	44° 33	56° 09	60° 29
Average daily range.....	12° 15	17° 39	12° 39	17° 93	19° 82	19° 05	19° 61
Greatest daily range.....	24° 3	31° 0	23° 3	33° 6	36° 9	30° 0	26° 8
Average height of barometer 32° Fah.	29° 6405	29° 8090	29° 6939	29° 6268	29° 5846	29° 5467	29° 5863
Difference from average (65 years)...	-° 0058	+° 1735	+° 0825	+° 0273	+° 0066	-° 0254	+° 0001
Highest barometer.....	30° 421	30° 423	30° 505	30° 052	30° 002	30° 001	30° 033
Lowest barometer.....	28° 752	29° 269	29° 027	29° 249	29° 107	29° 276	29° 180
Monthly and annual ranges.....	1° 669	1° 154	1° 478	0° 803	0° 895	0° 725	0° 853
Average of cloudiness.....	0° 70	0° 58	0° 66	0° 49	0° 60	0° 58	0° 49
Difference from average.....	-° 04	-° 10	+° 03	-° 09	+° 03	+° 06	0
Average humidity of the air.....	82	79	79	69	67	76	75
Difference from average.....	- 1	- 2	+ 1	- 1	- 3	+ 3	+ 3
Resultant direction of the wind.....	N 66° W	N 72° W	N 34° W	N 20° W	N 27° W	N 19° E	N 23° E
Resultant velocity of wind.....	4° 28	6° 19	3° 74	3° 35	2° 89	0° 58	1° 67
Average velocity (miles per hour)...	12° 12	11° 30	11° 62	10° 03	9° 01	7° 21	5° 82
Difference from average.....	- 0° 41	- 1° 70	- 0° 97	- 1° 21	- 0° 63	- 1° 19	- 2° 03
Highest velocity in month and year.	44° 0	32° 0	34° 0	33° 0	34° 0	28° 0	27° 0
Total amount of rain in inches.....	1° 320	0° 440	1° 315	1° 500	2° 510	3° 870	3° 405
Difference from average (66 years) ..	+ 0° 172	- 0° 463	- 0° 164	- 0° 656	- 0° 477	+ 1° 064	+ 0° 329
Number of days of rain.....	8	5	3	8	11	17	9
Total amount of snow in inches.....	4° 3	3° 6	12° 3	1° 1	*	*	*
Difference from average (66 years)...	- 13° 04	- 13° 31	+ 0° 78	- 1° 38	- 0° 11	*	*
Number of days of snow.....	8	8	12	2	0	*	*
Number of fair days.....	10	12	12	18	15	11	17
Number of days completely clouded	7	4	11	4	2	1	0
Number of auroras observed.....	0	0	0	0	0	1	0
Possible to see auroras (No. of nights)	15	11	16	21	15	15	10
Number of thunder storms.....	0	0	0	1	7	10	8
Number of fogs.....	4	2	2	0	0	3	1
Number of hours of bright sunshine...	88° 0	138° 7	116° 2	205° 2	223° 5	210° 5	260° 3
Number of hours of possible sunshine	299° 9	294° 0	369° 7	402° 8	456° 8	461° 9	468° 1

REGISTER FOR THE YEAR 1906.

TORONTO, ONTARIO.

above Lake Ontario 108 feet. Elevation above the Sea, 350 feet.

AUG.	SEPT.	OCT.	NOV.	DEC.	1906.	1905.	1904.	1903.	1902.	1901.	1900.
71°01 + 4°65 + 2°51	64°24 + 5°36 + 2°74	48°27 + 1°46 - 5°53	37°13 + 0°81 - 6°07	22°93 - 3°48 - 13°07	46°26 + 1°87 - 4°76	44°53 + 0°14 - 6°49	42°20 - 2°19 - 8°82	45°58 + 1°19 - 5°44	45°57 + 1°18 - 5°45	45°55 + 1°16 - 5°47	46°89 + 2°50 - 4°13
89°0 52°0 37°0 81°07 62°58 18°49 27°0	90°4 41°7 48°7 75°19 54°51 20°68 33°9	73°0 26°4 46°6 56°94 41°25 15°69 28°6	58°6 21°6 37°0 43°57 31°15 12°42 22°6	29°0 - 8°1 57°1 30°84 15°70 15°14 31°1	92°1 - 12°1 104°2 * 16°73 36°9	92°1 - 8°2 100°3 * 17°01 35°6	93°0 - 15°1 108°1 * 17°29 36°0	91°5 - 9°7 101°2 * 16°68 34°5	91°0 - 3°3 94°3 * 16°81 33°2	97°1 - 10°9 108°0 * 16°90 43°0	98°0 - 9°6 107°6 * 16°70 37°6
29°6176 + 0°0011 29°940 29°351 0°589	29°6883 + 0°0223 30°069 29°234 0°775	29°6418 - 0°085 30°193 28°865 1°328	29°7193 + 0°0939 30°250 29°190 1°060	29°7366 + 0°0903 30°289 29°198 1°084	29°6377 + 0°0381 30°505 28°752 1°753	29°6273 + 0°0077 30°493 28°840 1°653	29°6380 + 0°0184 30°449 28°752 1°697	29°6203 + 0°0007 30°309 28°742 1°567	29°5940 - 0°0256 30°394 28°712 1°682	29°5988 - 0°0208 30°328 28°868 1°460	29°6213 + 0°0017 30°224 28°802 1°422
0°45 °05	0°29 °21	0°59 °03	0°70 °04	0°73 °03	0°57 °04	0°58 °03	0°60 °01	0°61 °00	0°62 °01	0°61 °00	0°57 °04
75 + 1	75 - 3	81 + 2	79 - 1	86 + 4	77 0	78 + 1	79 + 2	76 - 1	77 0	76 - 1	76 - 1
N 23° E 1°13 9°23 + 1°42 31°0	N 34° W 1°05 9°98 + 1°97 30°0	N 23° E 1°87 13°55 + 4°32 41°0	N 23° W 4°59 14°14 + 3°11 43°0	N ° 8 E 6°11 15°31 + 2°12 49°0	N 25° W 2°64 10°78 + 0°37 49°0	S 87° W 2°73 9°72 - 0°64 54°0	N 67° W 2°09 10°17 - 0°19 50°0	W 2°45 10°83 + 0°47 40°0	N 60° W 2°53 10°98 + 0°62 44°0	N 55° W 2°99 10°26 - 0°10 45°0	S 88° W 3°09 10°97 + 0°61 44°0
1°825 - 1°007 11	3°670 + 0°478 7	4°266 + 1°784 13	1°605 - 0°907 12	1°540 - 0°017 5	27°206 + 0°136 109	25°825 - 1°245 97	30°040 + 2°970 100	25°631 - 1°439 100	26°105 - 0°965 116	25°200 - 1°870 102	22°130 - 4°940 99
* * *	* * *	2°8 + 2°17 3	0°8 - 3°83 2	12°8 - 0°22 9	37°7 - 28°94 66°64	54°3 - 12°34 49	56°5 - 10°14 53	50°0 - 16°64 52	49°2 - 17°47 37	70°7 + 4°06 54	74°6 + 7°96 42
16 0	23 1	16 5	15 4	13 15	178 54	190 59	175 61	171 61	181 59	183 58	187 51
0 9	0 6	0 23	0 16	1 15	2 13	6 196	2 177	5 184	2 185	2 201	3 224
7 1	3 0	1 2	0 2	0 2	37 19	30 23	37 26	26 22	34 31	29 29	34 29
251°4 433°3	243°8 364°4	128°8 342°5	81°3 291°5	68°7 279°2	2016°4 4464°1	2064°2 4464°1	1964°9 4475°2	2039°9 4464°1	1958°9 4464°1	1981°6 4464°1	2305°0 4464°1

TEMPERATURE.

	1906.	Average of 66 years.	EXTREMES.	
Average temperature of the year.....	46°26	44°39	47°15 in 1898	40°77 in 1875
Warmest month.....	August	July	July, 1868	Aug. 1860
Average temperature of the warmest month	71°01	67°84	75°80	61°46
Coldest month.....	February	February	Feb. 1875	Feb. 1848
Average temperature of the coldest month.	21°78	22°21	10°16	26°62
Difference between the temperature of the warmest and coldest months.....	49°23	45°63	.....	.....
Average of deviations of monthly means from their respective average of 66 years, signs of deviations being disregarded.	2°96	2°76	3°56	.....
Month of greatest deviation without regard to sign.....	January	January	Feb. 1875	.....
Corresponding magnitude of deviation.....	8°54	3°91	12°05	.....
Warmest day.....	26 Aug.	.....	July 14, 1868	July 31, 1844
Average temperature of the warmest day..	77°52	78°29	84°50	72°75
Coldest day.....	2 Feb.	.....	Feb. 6, 1855	Dec. 22, 42
Average temperature of the coldest day....	—3°90	—2°20	Jan. 22, 1857	9°57
Date of the highest temperature.....	22 July	.....	Aug. 24, 1854	Aug. 19, 1810
Highest temperature.....	92°1	91°30	99°2	82°4
Date of lowest temperature.....	2 Feb.	.....	Jan. 10, 1859	Jan. 2, 1842
Lowest temperature.....	—12°1	—12°00	—26°5	1°9
Range of the year.....	104°2	103°30	118°2	87°0

BAROMETER.

	1896.	Average of 65 years.	EXTREMES.	
	in.	in.	in.	in.
Average pressure of the year.....	29°6577	29°6196	29°6679 in 1849	29°5536 in 1864
Month of the highest average pressure.....	February	September	Feb. 1906	Sept., 1885
Highest monthly average pressure.....	29°8105	29°6660	29°8105	29°6479
Month of the lowest average pressure.....	May	June	March, 1859	Nov. 1849
Lowest monthly average pressure.....	29°5467	29°5721	29°4125	29°5868
Date of the highest pressure of the year....	24 March	.....	Jan. 8, 1806	Mar. 17, 1878
Highest pressure.....	30°505	30°363	30°940	30°139
Date of the lowest pressure of the year....	4 Jan.	.....	Jan. 2, 1870	June, 2 1894
Lowest pressure.....	28°752	28°709	28°166	29°035
Range for the year.....	1°753	1°654	2°24— in 1893	1°303 in 1845

RELATIVE HUMIDITY.

	1906.	Average of 65 years.	EXTREMES.	
Average humidity of the year.....	77	77	82 in 1851	73 in 1858-71
Month of greatest humidity.....	Dec.	January	Dec. 1878	Dec., 1858
Greatest average monthly humidity.....	86	83	94	81
Month of least humidity.....	May	May	Feb. 1843	April, 1849
Least average monthly humidity.....	67	70	58	76

EXTENT OF SKY CLOUDED.

—	1906.	Average of 53 years.	EXTREMES.	
Average cloudiness of the year.....	0.57	0.61	0.66 in '69 '76	0.56 in 1899
Most cloudy month.....	December	December	0.89	0.73
Greatest monthly average cloudiness.....	0.73	0.76	0.89	0.73
Least cloudy month.....	Sept.	July	0.29	0.51
Least monthly average of cloudiness.....	0.29	0.49	0.29	0.51

WIND.

—	1906.	Average of 17 years.	EXTREMES.	
Resultant direction.....	N. 25° W.	N. 61° W.		
Resultant velocity in miles.....	2.64	2.51		
Average velocity without regard to direction.....	10.78	9.70	12.33 in 1897	8.32 in 1878
Month of greatest average velocity.....	December	December	Feb., 1897	Dec. 1875
Greatest monthly average velocity.....	15.31	13.19	17.01	10.42
Month of least average velocity.....	July	July	July, 1888	July, 1881
Least monthly average velocity.....	5.82	7.67	5.93	8.43
Day of greatest average velocity.....	22nd Nov.		Nov. 17, 1870	Feb. 10, 1885
Greatest daily average velocity.....	33.21	28.98	41.67	22.79
Day of least average velocity.....	13th Feb.			
Least daily average velocity.....	1.71			
Hour of greatest absolute velocity.....	6th Dec.		Dec 1, 1895	Jan. 17, 1885
Greatest velocity.....	3 to 4 p.m. 49.0	45.67	9 to 10 a.m. 61.0	10 to 11 a.m. 39.0

NOTE.—During the year 1906 the wind has been partly obtained from the Records of the anemograph at the Eastern Gap and no comparison has been made with the results of former years.

RAIN.

—	1906.	Average of 66 years.	EXTREMES.	
Total depth of rain in inches.....	27.206	27.070	43.555 in '43	17.574 in '74
Number of days on which rain fell.....	109	112	145 in 1890	80 in 1811
Month in which the greatest depth of rain fell.....	Oct.	September	Sept., 1813	June, 1887
Greatest depth of rain in one month.....	4.206	3.192	9.760	2.655
Month in which the days of rain were most frequent.....	June	October	May, 1890	May, 1841
Greatest number of rainy days in one month.....	17	13	23	11
Day on which the greatest amount of rain fell.....	19th Oct.		July 27, 1897	Sept. 14, '48
Greatest amount of rain in one day.....	2.160	1.950	3.881	1.000

SNOW.

	1906.	Average of 63 years.	EXTREMES.	
Total depth of snow in inches.....	37.7	66.6	122.9 in 1870	31.8 in 1899
Number of days on which snow fell.....	44	64	87 in 1859	33 in 1848
Month in which the greatest depth of snow fell.....	December	January	March 1870	Feb., 1851
Greatest depth of snow in one month.....	12.8	17.3	62.4	10.7
Month in which the days of snow were most frequent.....	March	January	Dec., 1872	Feb., 1848
Greatest number of days of snow in one month.....	12	14	24	8
Day in which the greatest amount of snow fell.....	19th March	.....	Mar. 28, 1876	Jan. 46, 1888
Greatest fall of snow in one day.....	7.0	8.9	16.2	3.0

SUNSHINE.

	1906	Average 1882 to 1905
Total duration of bright sunshine in hours.....	2016.4	2052.4
Ratio to possible amount.....	0.45	0.46
Month of greatest relative amount.....	September	July
Ratio to possible amount.....	0.67	0.60
Month of least relative amount.....	December	December.
Ratio to possible amount.....	0.25	0.22
Number of days completely clouded.....	54	61
Day of greatest relative amount.....	11th Dec.	.....
Ratio to possible amount.....	0.93	0.91

DIFFERENCE OF CERTAIN METEOROLOGICAL ELEMENTS FOR 1906 FROM THE
NORMAL VALUES FOR EACH QUARTER AND YEAR.

	Bar.	Temp.	Rain.	Days Rain.	Snow.	Days Snow.	Clouded Sky.
	in.	°	in.	in.	in.		p. c.
Winter.....	+0.558	+4.31	-0.176	+2.11	-33.38	-16.67	-03
Spring.....	+0.388	+0.40	-1.297	-6.70	-0.71	-0.19	-01
Summer.....	-0.081	+2.98	+0.386	+3.30	.....	.....	00
Autumn.....	-0.039	+2.54	+1.355	-2.22	-1.88	-8.79	-09
Year.....	+0.006	+2.56	+0.268	-3.51	-35.97	-25.65	-03

NOTE.—The quarters and year in this table are from the preceding December to 30th November.

PERIODICAL OR OCCASIONAL EVENTS, 1906.

- January..... 8. Bay frozen. 13th, Breaking up. 15th, Clear. 30th, Sap running freely from maples.
- February..... 2. Coldest day of year, $-3^{\circ}.9$; lowest temperature, $-12^{\circ}.1$. 3rd, Bay frozen up.
- March..... 10. Steamer Macassa arrived, broke up the ice.
- April..... 1. Bluebirds, Juncos, Frogs piping. 2nd, Robins. 3rd, Song Sparrows, Bronze Grackles. 4th, Blackbirds. 6th, Crocus in bloom. 7th, Last snow. 8th, Earth worms out, frost out of ground. 9th, Reed Birds, Kinglets. 10th, Phoebe. 12th, Ploughing, Honey Bees. 13th, Hepatica and Maples in bloom, Meadow Larks, Flickers. 17th, Towhees, Nuthatch. 18th, Grain sowing. 19th, Chipping Sparrow, Thrush. 20th, Elm in bloom. 22nd, Kingfisher, Brown Thrasher, Blood Root in bloom. 26th, Goldfinch. 27th, Potato planting. 28th, Dandelion, Swallows. 29th, First thunderstorm. 30th, White Crowned Sparrow, Whip-poor-will.
- May..... 1. Arbutus, Violet and Stonecrop in bloom. 4th, Trillium, Cat Birds, Doves. 5th, Bobolink, Black and White Warbler, Yellow Warbler, Anemone in bloom. 10th, King Birds, Oven Bird. 11th, Last frost. 12th, Dog Tooth Violet, Orioles. 13th, Plum and Wild Cherry in bloom. 15th, Humming Birds, Garden Currants and Japonica in bloom. 16th, Pears. 18th, Apple and Blueberry in bloom, Vereo, Night Hawk, Peaches in bloom. 21st, Choke Cherry in bloom. 23rd, Horse Chestnut in bloom. 24th, Lilac. 27th, Columbine, Lupin. 28th, Buttercups.
- June..... 3. Cuckoo. 6th, White Clover in bloom. 10th, Red Clover and Wild Raspberry in bloom. 13th, Wild Rose and Thimbleberry in bloom.
- July..... 6. Highest water of year, 22 inches above zero. 15th, Hay cutting. 28th, Golden Rod in bloom.
- August..... 26. Warmest day of year, mean temperature $77^{\circ}.5$.
- September..... 12. Leaves falling freely from hardwood trees, want of moisture.
- October..... 8. First frost. 12th, First ice. 8th, Last thunderstorm. 19th, Heaviest rainfall of year, $2^{\circ}.160$ inches.
- December..... 1. Lowest water in Bay $1\frac{1}{2}$ inches above zero. 13th, Last vessel to arrive, "Ballow," from Frenchman's Bay.

